



International Association of Fish and Wildlife Agencies

Representing Fish and Wildlife Agencies since 1902

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June 22, 2005

Mr. Mark Friedrichs, PI-40
Office of Policy and International Affairs
U. S. Dept. of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Friedrichs:

The International Association of Fish and Wildlife Agencies (IAFWA, Association) appreciates the opportunity to provide comment on the Guidelines for Voluntary Greenhouse Gas Reporting, along with the draft Technical Guidelines, as published in the Federal Register March 24, 2005. The Association, founded in 1902, represents the government agencies responsible for North America's fish and wildlife resources. IAFWA applies expertise in science, policy, economics and coalition-building to serve its members as a national and international voice on a broad array of wildlife and conservation issues. The Association's governmental members include the fish and wildlife agencies of the states, provinces, and federal governments of the United States and Canada. All fifty states are members of the Association.

IAFWA's interest in the Guidelines rest primarily in the use of terrestrial carbon sequestration as a tool for reducing carbon emissions in accord with the President's Global Climate Change Initiative, and the potential impacts, both good and bad, on fish and wildlife habitat, and ultimately, on ecosystem health. As stated in the Guidelines, the "Chairman of the Council on Environmental Quality in his opening remarks at the Washington workshop on the Notice of Inquiry in this proceeding, the revised 1605(b) Guidelines can 'create a building block of recognition that will be acknowledged and recognized with respect to any future climate policy'". As such, these Guidelines provide a basis on which future global climate change policies may be developed, and the resulting policies have the potential to shape future land use and management decisions at a landscape level. As a case in point, American agricultural policy has had tremendous impact on ecosystem health and fish and wildlife habitats. IAFWA has been a major voice in the shaping and re-shaping of Farm Bill conservation programs to be more environmentally friendly. We view terrestrial carbon sequestration in much the same light as Farm Bill programs, and will take an active role in ensuring that policies relative to terrestrial carbon sequestration make positive contributions to ecosystem health, and minimize negative impacts.

In 2003, the IAFWA published a white paper on terrestrial carbon sequestration, entitled *Integrating Conservation Principles into the Development of Accounting Rules and Guidelines for Terrestrial Carbon Sequestration*. This white paper addresses the primary issues of concern on terrestrial carbon sequestration as a conservation issue, and provides

recommendations on integrating conservation principles into the development of terrestrial carbon sequestration guidelines. The white paper also addresses the integration of sequestration benefits and credits into Farm Bill conservation programs. By reference, we are attaching a copy of the white paper, and ask that it be added to the public record of comments on these Guidelines.

We find that the General Guidelines and Draft Technical Guidelines provide a thorough review of the myriad processes and types of activities that lead to carbon emissions and emission reductions, and how to account for those emissions and emission reductions. However, we do not find within the Guidelines or the Draft Technical Guidelines a thorough review of the ecological processes or functions involved in terrestrial carbon sequestration. This issue is treated to a minimal degree within Sections H (Agricultural Emissions and Sequestration) and I (Forestry Emissions), which in our opinion, is an inadequate review. Therefore, we recommend that a Section J entitled Ecosystem Restoration and Terrestrial Carbon Sequestration be added to Chapter 1 of the Draft Technical Guidelines. This new section would provide an overview of the science of terrestrial carbon sequestration, place it into context with ecological processes and ecosystem functions, and provide information and guidance on the development of terrestrial carbon sequestration projects incorporating conservation principles that would provide for functional ecosystems and ecological processes.

The basis for this recommendation is the fact that, for some number of years now, a number of corporations, organizations and agencies have pursued on the ground projects which result in increased carbon sequestration, but also yield ecosystem benefits through the restoration of fish and wildlife habitats and other ecological processes. Potential carbon emission reporters and registrants should be made aware of the wide range of restoration opportunities (e.g., forests, grasslands, wetlands), and they should have easy access to information within the technical guidelines that would provide guidance in the development of these kinds of projects. IAFWA and its partners would welcome the opportunity to assist in the drafting of this new section into the Draft Technical Guidelines.

Beyond our major recommendation above, we are concerned about the issue of defining entities, aggregators, and third parties as it relates to reporting and registering carbon sequestration projects. The guidelines as currently drafted place undue burden on reporting entities, aggregators and third parties to provide information that would significantly increase costs of carbon sequestration projects, and likely discourage them in many cases. We recommend that for terrestrial carbon sequestration projects, these requirements be simplified in order to encourage the assembly of small projects of terrestrial carbon sequestration.

We are also concerned by the omission of wetlands from the list of terrestrial carbon pools described in the Draft Technical Guidelines. Wetland restoration can sequester carbon while also playing an important role in maintaining healthy ecosystems. Wetlands should be included in the description of carbon pools along with a process by which carbon stored in wetlands can contribute to an entity's registered reductions.

Regarding the section on Forest Preservation (Part I, Section 1.I.4.5; pages 234-235), we recognize and applaud USDA for drafting a provision that protects existing forests as a

reportable method for mitigating increases in atmospheric carbon. We would recommend that this provision exclude forests that are monocultures (except in cases where restoring natural forests favor monoculture systems, e.g., longleaf pine ecosystems), forest plantations, or forests composed of predominately non-native species.

Thank you for the opportunity to comment on these Guidelines.

Sincerely,

A handwritten signature in black ink, appearing to read "John Baughman". The signature is fluid and cursive, with a long horizontal stroke extending from the end.

John Baughman
Executive Vice President

Encl: IAFWA Carbon Sequestration White Paper

Integrating Conservation Principles into the Development of Accounting Rules and Guidelines for Terrestrial Carbon Sequestration:

**A White Paper of the
International Association of Fish & Wildlife Agencies**



**444 North Capitol Street, NW, Suite 544
Washington, DC 2001**

JULY 2003

Integrating Conservation Principles into the Development of Accounting Rules and Guidelines for Terrestrial Carbon Sequestration: A White Paper of the International Association of Fish & Wildlife Agencies

Introduction

This paper is intended to serve as a guide to the International Association of Fish and Wildlife Agencies' (IAFWA) member agencies, as well as the conservation community in general, in developing and articulating positions relative to pending and future policies and legislation pertaining to carbon sequestration. Specifically, this paper will deal with the issue of accounting rules and guidelines that are to be developed for terrestrial carbon sequestration, and how conservation principles can and should be integrated into those rules and guidelines. We will offer the view that carbon sequestration is, in essence, a conservation issue, with tremendous potential to not only offset the emissions of greenhouse gases through the storage of carbon, but also to restore the ecological functions of terrestrial ecosystems and their capacity to store carbon.

Much in the same way that Farm Bill conservation programs have had a tremendous impact on the nation's wildlife and fish habitats since 1986, carbon sequestration programs are likely to be as influential, if not more so, on the landscapes of tomorrow. Therefore, the conservation community must devote the same level of attention to the development of these new programs as we have to the Farm Bill conservation programs that we are already familiar with. Considering that land in the United States is a finite resource, which is being subjected to increasing pressure to provide a variety of societal needs, it is essential that carbon sequestration initiatives accomplish as many additional environmental purposes as possible. It will be a poor bargain for society if efforts to offset greenhouse gases through carbon sequestration result in a diminishing of other natural resources for which society would have to pay separately and additionally to correct.

Background

Carbon sequestration can be defined as the capture and secure storage of carbon that would otherwise be emitted to or remain in the atmosphere. As the Department of Energy's third approach (in addition to increased fuel efficiency, and alternative technologies) in managing greenhouse gas emissions in the United States, carbon sequestration is believed to have immediate potential to reduce greenhouse gases in ways and at a cost that is both economically feasible and environmentally acceptable. The Department of Energy in its "Carbon Sequestration Technology Roadmap" has identified two goals for carbon sequestration, one of which is to demonstrate environmental acceptability. However, some in the environmental community have expressed ideological resistance to carbon sequestration as a greenhouse gas management tool, primarily due to its being seen as solely an emissions-offset issue, and a way

around other strategies to reduce greenhouse gas emissions, such as increased efficiency of automobiles, or the use of alternative technologies to produce energy.

In addition to the release of atmospheric carbon through the emissions of fossil fuels, another major cause of the loss of stored carbon, as much as 50 percent over the last 50-70 years, has been the wide-scale alterations in the landscape through de-forestation and conversion to agriculture, urbanization, and other activities. According to USDA (2002), “The dominant drivers in terrestrial carbon emissions have been the conversion of forest and grassland to crop and pastureland, and the concomitant depletion of soil carbon from conventional agricultural management practices.” This has resulted in increased carbon emissions to the atmosphere and reduced capacity of the terrestrial ecosystem to capture and store atmospheric carbon.

On February 14, 2002, President Bush announced his Administration’s Global Climate Change Initiative, which is aimed at reducing the growth of GHG emissions in the U.S. while sustaining economic growth. The President established a target of reducing the greenhouse gas intensity of the U.S Economy (a measure of the ratio of GHG emissions to Gross Domestic Product) by 18 percent over the next 10 years. As part of the Global Climate Change Initiative, a range of new and expanded domestic energy policies will be implemented, including carbon sequestration. To accomplish this aspect of the initiative, President Bush “directed the Secretary of Agriculture to provide recommendations on further, targeted incentives for forest and agricultural sequestration of greenhouse gases. The President further directed the Secretary of Agriculture, in consultation with the Environmental Protection Agency and Department of Energy, to develop accounting rules and guidelines for crediting sequestration projects, taking into account emerging domestic and international approaches.”

Through terrestrial carbon sequestration, the Department of Energy has established “regional improvements in ecosystem stability, biodiversity and water quality” as expected outcomes of the ancillary or collateral benefits of terrestrial carbon sequestration. In other words, conservation benefits are seen only as a potential by-product of terrestrial carbon sequestration. However, there is also potential and the need to create a paradigm whereby terrestrial carbon sequestration is seen as an ecosystem restoration tool, providing both carbon storage benefits and ecosystem restoration benefits. Without this new paradigm becoming an integral component in the development of carbon storage programs, the potential for programs with harmful impacts to natural ecosystems and their health will increase.

Conservation Issues

As the development of accounting rules and guidelines moves forward, there are a number of issues that the conservation community should be prepared to address. The resolution of these issues will greatly influence whether carbon sequestration will be viewed as an environmental asset or an environmental liability. To strengthen carbon sequestration’s potential as an environmental asset, public agencies with fish and wildlife population management responsibilities must be brought into the decision-making process.

- Terrestrial carbon sequestration, as the third approach in managing greenhouse gas emissions, will become a conservation catalyst, much the same way that farm policies and other major land use policies have been catalysts for large-scale habitat change in the past. This force for change has both positive and/or negative potential impacts on ecosystems and their habitats.
- Terrestrial carbon sequestration will introduce an economic variable into land use and land management decisions that will likely be unprecedented in scope, and unknown in effect. In essence, carbon sequestration programs will affix an economic value onto an ecological function, a value which heretofore has never been part of the equation in making land use or land management decisions.
- Without appropriate guidelines and restrictions and/or incentives, economic forces of carbon sequestration could negatively influence the ability to restore native habitats and ecosystem integrity. Non-native species may be shown to possess greater carbon storage capability than native species, thus creating an economic market force that will provide cheaper carbon storage methods, but yield no ecological benefits, or perhaps even cause further degradation of ecosystems.
- Within the environmental community, a number of organizations harbor an ideological resistance to carbon sequestration programs, seeing these programs as ways to avoid other alternatives for reducing greenhouse gases. Without incorporating conservation principles into the development of guidelines and accounting rules, ideological resistance to carbon sequestration programs is likely to become stronger and broader among many mainstream conservation organizations, especially if carbon programs result in adverse impacts to floral and faunal communities.

The Farm Bill and Carbon Sequestration

The President's Global Climate Change Initiative has identified the Farm Bill and its conservation provisions as a primary vehicle for accomplishing significant carbon sequestration benefits in the next 10 years. In his FY03 budget, President Bush requested a \$1 billion increase in Farm Bill funding "as part of a ten year (2002-2011) commitment to implement and improve the conservation title of the Farm Bill, which will significantly enhance the natural storage of carbon."

Activities and program objectives pertaining to carbon sequestration are identified in three titles of the 2002 Farm Bill:

- Title 2, Conservation. Sec. 1240H. Conservation Innovation Grants – *“implement projects, such as” “(B) innovative conservation practices, including the storing of carbon in the soil”*
- Title 8, Forestry. Sec. 4. Forest Land Enhancement Program – Program Objective #4 is *“Increasing and enhancing carbon sequestration opportunities.”*
- Title 9, Energy. Sec. 9009. Cooperative Research and Extension Projects – Purposes:
 - Developing data addressing carbon losses and gains in soils and plants (including trees) and the exchange of methane and nitrous oxide from agriculture;
 - Understanding how agricultural and forestry practices affect the sequestration of carbon in soils and plants (including trees);
 - Evaluating the linkage between federal conservation programs and carbon sequestration;
 - Developing methods, including remote sensing, to measure the exchange of carbon and other greenhouse gases sequestered, and to evaluate leakage, performance, and permanence issues.

It is clear that the Farm Bill will be of emerging importance as a vehicle for delivering a significant portion of the nation’s carbon sequestration efforts. Coupled with the Secretary of Agriculture’s responsibilities “to provide recommendations on further, targeted incentives for forest and agricultural sequestration of greenhouse gases” and “to develop accounting rules and guidelines for crediting sequestration projects”, conservation organizations must be prepared to become engaged in this process to ensure that sound conservation policies are considered and incorporated into carbon sequestration program development.

Operating Principles to Guide the Development of Accounting Rules and Guidelines

The following principles are offered as guiding principles for IAFWA and its member organizations in developing positions and recommendations relative to carbon sequestration accounting rules and guidelines.

- Adopt a Conservation-based Vision of Terrestrial Carbon Sequestration
 - The vision should recognize that carbon sequestration is a conservation issue in a fundamental sense, and not just in an ancillary or collateral sense.
 - The vision should be eco-regionally based (temperate forests, forested wetlands, prairies, grasslands, etc.), recognizing that different ecosystems have inherently different carbon storage mechanisms and capabilities, and carbon sequestration

activities should be tailored to those capabilities while recognizing the priority fish and wildlife habitat needs unique to each eco-region.

- Apply the *Principle of Concurrent Restoration* to determinations.
 - The *Principle of Concurrent Restoration* seeks to restore the natural ecological capability of the terrestrial ecosystem to store carbon by promoting policies and guidelines that will restore that ecosystem in an environmentally sustainable way. Carbon sequestration activities should not diminish other natural resources, including fish and wildlife.

Principle of Concurrent Restoration: Whereas the process of terrestrial carbon sequestration involves the restoration of a degraded ecological function, the restoration of that function should not come at the expense of other ecological functions and values and should in fact produce concurrent restoration benefits.

- Identify fish and wildlife as public resources that are managed by states for the benefit of present and future generations.
 - These public resources make significant contributions to the nation's economy through fish and wildlife-related recreation, with 82 million participants spending over \$100 billion in 2001. Because terrestrial carbon sequestration has the potential to alter the current landscape and habitats that fish and wildlife depend on, states occupy an important and unique role as a stakeholder in the development of these programs. Rules and guidelines that assign value to land use and that may result in large-scale conversions of habitat require consultation with state fish and wildlife agencies.

USDA Accounting Rules and Guidelines

As the USDA moves through its process of developing accounting rules and guidelines, as directed by the President, there are a number of issues and questions concerning their development that should be addressed relative to the *Principle of Concurrent Restoration* for terrestrial carbon sequestration. Therefore, we offer the following conservation principles that should be considered in evaluating and developing recommendations relative to Accounting Rules and Guidelines:

- **Qualifying activities** for terrestrial carbon sequestration should provide benefits to both carbon sequestration and ecological restoration. Under Section 1605(b) of the *Energy Policy Act of 1992*, the Department of Energy developed a Voluntary Reporting of Greenhouse Gases Program, including voluntary reporting of carbon sequestration projects. Within this program, a number of forestry and agricultural activities are listed with potential carbon sequestration benefits. Some activities, such as afforestation of agricultural lands, have the potential to provide ecological benefits if conducted with an ecological restoration objective. Likewise, such activities could also adversely impact

wildlife habitat if, for instance, exotic species were used or a monoculture plantation forest were established. The Department of Energy also recognizes that prairie and grassland ecosystems hold great promise to provide carbon storage benefits, though less work has been conducted in these systems compared to forested systems. Therefore, carbon sequestration programs designed for prairie and grassland ecosystems should be carefully constructed to maintain and/or enhance the ecological integrity of the system while providing carbon storage benefits.

- Qualifying activities should be eco-regionally based, to ensure compatibility of carbon sequestration practice(s) with the climate and soil characteristics of the area. Incentives should be established to promote and encourage carbon sequestration projects that include an ecological restoration component.
- Qualifying activities should require or provide incentives to use native species rather than exotic or invasive species in carbon sequestration projects.
- Qualifying activities should require or provide incentives for carbon sequestration projects to promote diverse landscapes utilizing endemic species as opposed to exotic or monoculture systems (except in cases where restoring natural forests favor monoculture systems, e.g., longleaf pine ecosystems). These incentives should be developed for both forested and prairie ecosystems.
- Qualifying activities should encourage and promote the development of carbon sequestration projects utilizing natural vegetation systems, as opposed to “enhanced” vegetation.
- Qualifying activities for primary and secondary existing forests should include provisions that allow and encourage thinning and other forest stand improvement practices, when needed, to reduce excessive stocking levels. This will result in benefits to many wildlife species, with the added benefit of increased timber quality at the end of the rotation.
- Careful consideration must be given to the integration of carbon sequestration benefits and credits into existing Farm Bill conservation programs such as the Conservation Reserve Program and the Wetlands Reserve Program. Likewise, new Farm Bill conservation programs, such as the Conservation Security Program and Grassland Reserve Program have the potential to significantly influence conservation on private lands, and provide further carbon sequestration benefits. If carbon sequestration benefits are included as part of the ranking process for these programs, they should not detract from other intended conservation benefits to wildlife habitat, soil conservation, and water quality, and in fact should be structured to enhance these benefits. **If carbon sequestration credits are to be allowed within these publicly financed programs, then practices should be required to provide concurrent environmental benefits.**

- **Addressing the issues of additionality, leakage, permanence, and verification**
 - To ensure that carbon sequestration programs result in a net gain of stored carbon within an environmentally sustainable context, the issues of **additionality** (carbon storage benefits accrued in addition to what would occur in the absence of a carbon project), **leakage** (migration of carbon emitting activities such as logging or land clearing to other areas outside the project area, effectively offsetting carbon sequestration benefits), **permanence** (duration of carbon storage methods), and **verification** (methods for measuring and verifying carbon sequestration benefits) should be addressed with careful consideration of their ecological impacts.
- **Addressing the issue of scale**
 - **Scale** refers to the land area that will be used to determine baseline carbon storage capacity (no carbon offset programs in place), and also to evaluate additionality and leakage as carbon programs are established. The scale for carbon sequestration programs should be of sufficient size to enable effective monitoring of additionality and leakage. At a minimum, carbon programs should be accounted for and reported at the county level. This would allow for state and region-wide summaries with minimal effort. However, consideration for an ecological scale is also warranted, which will require more sophisticated measurements and analyses. Therefore, carbon projects should be geospatially referenced, to allow for GIS analyses utilizing remote sensing data and other technologies.
- **Development of demonstration and research projects**
 - In the energy title (Title IX) of the 2002 Farm Bill, emphasis is placed on developing demonstration and cooperative research projects to further the understanding of carbon sequestration on the carbon cycle, increase the understanding of how agricultural and forestry practices affect the sequestration of carbon in soils and plants, develop cost-effective means of measuring and monitoring changes in carbon pools in soils and plants, evaluate the linkage between federal conservation programs and carbon sequestration, and to establish benchmark standards for future carbon programs. However, none of these objectives will lead to an evaluation of environmental acceptance of carbon storage methods, or whether concurrent restoration benefits will result. **Therefore, in addition to these objectives, demonstration projects should assess concurrent restoration benefits and the environmental acceptability of carbon sequestration methods.** Demonstration projects should also promote additionality, and not result in the conversion of native grasslands to forests or other non-native systems.
- **Monitoring and evaluation** should address not only the carbon response, but also the ecological response.

- A monitoring and evaluation component for a carbon sequestration program should be able to evaluate the following: 1) Sequestration estimates and measurement; 2) Baseline development; 3) Leakage assessment; 4) Permanence; 5) Ecological benefits, including habitat restoration, water quality, flood storage, etc.